# REVISED PLAN FEBRUARY 2016

# LOWLAND ACID GRASSLAND

## 1. INTRODUCTION

Gorse
© Camille Newton

Lowland acid grassland typically occurs on nutrient-poor, free-draining soils with a pH ranging from 4 to 5.5. It usually overlies acid rocks such as Hartshill quartzite, or superficial deposits such as sands and gravels, though occasionally it also forms upon post-industrial sites and made-up ground such as embankments, railway siding, disused railways and spoil heaps within the above geological zones (e.g. Alvecote Pools). The habitat often co-exists with lowland heathland habitats, birch scrub or woodland and frequently contains small areas of mire.

Acid grassland habitats include the *Sheep's-Fescue – Common Bent – Sheep's Sorrel* (U1), *Sheep's-Fescue – Common Bent – Heath Bedstraw* (U4) and *Matt Grass – Heath Bedstraw Grassland* (U5) National Vegetation Classification grassland plant communities. Calcifugous plants such as bracken (*Pteridium aquilinum),* foxglove (*Digitalis purpurea),* gorse (*Ulex europaeus)* and wood sage (*Teucrium scorodonia)* are also commonly associated with acid grassland.

Acid grasslands are characteristically species poor and support a few particularly rare plant species in this area. However these habitats contain important elements of the county's biodiversity, e.g. mat grass *(Nardus stricta),* sheep's sorrel (*Rumex acetosella),* and heath-grass (*Danthonia decumbens).* Many of the invertebrates that occur in acid grassland are specialist species, which do not occur in other types of grassland locally (though some will use calcareous grasslands or coastal dunes elsewhere) and a good number of Nationally Scarce and Regionally Scarce species rely heavily upon acid grassland.

Insect species using this habitat include the dingy mocha moth (*Cyclophora pendularia)* and green hairstreak butterfly (*Callophrys rubi).* The open, dry acid grasslands on sandy soils in particular, can support a considerable number of ground-dwelling and burrowing invertebrates such as solitary bees and wasps. Any rough grassland associated with this habitat would be valuable for barn owls *(Tyto alba).*

As with other lowland semi-natural grassland types, acid grassland has undergone a substantial decline in the 20th century. The decline is mostly due to agricultural intensification. Locally, a large proportion of sites were lost prior to this time through urban development during the 19th century. Later significant losses came from afforestation and succession to scrub and woodland. Further development and conversion to amenity grassland have also been significant. The opportunities afforded by restoration of mineral extraction processes are particularly valuable for this rare habitat.

| 2. | OBJECTIVES* | TARGETS* |
|---|---|---|
| Associated Action Plans are: '*Open Mosaic Habitats on Previously Developed Land', 'Lowland Heathland', 'Churchyards & Cemeteries', 'Quarries & Gravel Pits', 'Parks & Public Open Spaces', 'Roadside Verges', 'Bats', 'Lapwing', 'Barn Owl', 'Adder'* and *'Great Crested Newt'* | | |
| PLEASE CONSULT THE ***'GENERIC HABITATS'*** ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL HABITAT PLANS | | |
| **A.** | **To achieve condition of 20ha of existing lowland acid grassland above 0.25ha that are currently in unfavourable condition, to favourable or recovering, giving priority to those holding UK Biodiversity Action Plan Priority Species & Red Data Book species.** | **2026** |
| **B.** | **To expand the extent of the habitat by 11ha.** | **2026** |
| ***Derived from Regional Spatial Strategy Phase 3 Technical Report (2009)** and based on a minimum mapping unit of 0.25ha. **Numerical targets have been incorporated into section 6.** See **Generic Habitats Plan** for rationale for derivation of targets and definitions of favourable and unfavourable condition **('Habitats overview' in 'State of the Natural Environment' (NE,2008,p49).** | | |

## 3. NATIONAL BAP OBJECTIVES AND TARGETS

Lowland Dry Acid Grassland is on the current UK Biodiversity Action Plan (BAP) list of Priority Habitats published in 2007(Joint Nature Conservation Committee). The targets and objectives for the Lowland Dry Acid Grassland BAP, updated in 2010-11, may be seen online.

## 4. CURRENT STATUS

Lowland acid grasslands are extremely rare and not extensive in Warwickshire, being mainly associated with heathland, woodland or post-industrial sites. They are largely confined to the acid glacial soils in the north of the County on the Midlands Plateau Natural Area and can be seen as outliers to the very extensive areas of acid grassland in neighbouring counties, e.g. at Sutton Park, Chasewater and particularly Cannock Chase. Lowland acid grassland has been lost from Warwickshire largely as a result of urban development of heathlands in the 19th century.

- Baseline data from the 1998-2001 Habitat Biodiversity Audit recorded the total area of acid grassland in Warwickshire, Coventry & Solihull to be 38.2ha, with 13ha unimproved and 25.2ha improved. However, figures from the HBA in 2012 were 72.75ha, with 2.44ha unimproved and 70.31ha semi- improved. This apparent doubling of the area may reflect an increase in the area of the habitat and/ or an increase in the level of recording. Provided the target for expansion is met, this area will increase to 75.75ha by 2015 and to 83.75ha by 2026.

- In 2011 the total resource within Sites of Special Scientific Interest (SSSI) was 1.15ha on 3 sites (see chart below).

**Natural England estimates of acid grassland on SSSIs in Warwickshire, Coventry & Solihull in 2012 (pers.comm. Anton Irving)**

| SSSI | Unimproved acid grass-land area (ha) | Associated habitat |
|---|---|---|
| Coleshill Pool | 0.4 | Woodland |
| Clowes Wood | 0.5 | Woodland |
| Rough Hill (Studley) & Wirehill Woods | 0.25 | Woodland |
| **Total** | **1.15ha** | |

- The largest area of this habitat is the sub-region is approx. 5ha: at Grendon (2ha) and Baddesley Common (3ha), both designated Local Wildlife Sites (LWS). Much of the acid grassland and associated heathland here has developed on restored open cast coal workings since the 1950s but unfortunately is now mainly woodland.

- Fragments of acid grassland, mainly of 0.5ha or less, occur at Burton Dassett Country Park and at the three SSSIs - Clowes Wood, Rough Hill Wood and Coleshill Pool; also at the following designated LWSs: Whittleford Park, Kenilworth Common, the Orchard Colliery, Dordon, Coombe Country Park, Longford Park, Kingsbury Colliery spoilheap and the Boons / Jees / Judkins / Midland Quarry area. Some acid grassland occurs in the rides of Poors Wood, Hay Wood and Brandon Wood (all LWS) and at Slough Farm and Whitehall Farm, Hartshill (both designated LWSs in 2011). Other fragments may still occur in the Purley Park - Hartshill area and within the quarries and spoilheaps of the Atherstone Ridge.

- Small areas of acid grassland occur on mounds at the back of Ryton church, Coventry airport, Brandon Wood Farm (WWT, July 2014) and in Abbey Fields, Kenilworth, a potential LWS.

## 4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the Wild Birds Directive (1979), the Wildlife and Countryside Act (1981), the Conservation Regulations(1994) and EC Habitats Directive (1992). Protection of sites is afforded nationally through SSSI, Special Areas of Conservation (SAC) and Local Nature Reserve (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS),, Local Character Areas and identified Landscape Scale Areas. The National Planning Policy Framework (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the Conservation of Habitats & Species Regulations (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

Less than 2% of the known area of acid grassland in Warwickshire, Coventry & Solihull is on SSSI land but the largest areas, Grendon and Baddesley Common, are both designated as LWSs. Work within the LBAP area continues to classify other lowland acid grasslands as LWS which will afford them policy protection within the planning system.

### 4.2 Current Factors Affecting the Habitat

In the past lowland acid grassland was lost across England primarily to agriculture, forestry, mineral extraction and development. The main factors affecting the habitat in Warwickshire, Coventry and Solihull at present are:

- **Encroachment of trees and scrub** and the loss of early successional stages due to a lack of conservation management such as light grazing, controlled burning and cutting.
- **Fragmentation and isolation** as the few sites in Warwickshire are widely scattered. This can result in very small and vulnerable populations of associated insects.
- **Lack of public awareness** as most lowland acid grassland has been lost to development in the 19th century, and therefore is not part of the public perception of the area.
- **Development of post-industrial sites and disused railway lines** which contain fragments of acid grassland.
- **Conversion of some sites to regularly-mown amenity sites** – especially within urban and suburban areas.
- **Agricultural improvement** such as intensive fertilizer, lime and herbicide application.

## 5. LOCAL ACTION

- An accurate digitised database of acid grassland in the sub-region has been established by the Habitat Biodiversity Audit (HBA) and is annually updated.
- Lowland acid grasslands have been identified as a priority habitat for re-creation in the Midlands Plateau Natural Area.
- The existing management of most acid grassland sites is known. Favourable condition is being maintained / achieved at the following sites:
  - In 1997 at Grendon and Baddesley Common, the Merevale Estate began a plan to manage Warwickshire's largest lowland acid grassland, and its associated heathland, with financial support of agri-environment schemes administered by Natural England.
  - Warwickshire Wildlife Trust (WWT) is actively managing an area of under 1ha of lowland acid grassland / heathland mosaic at Clowes Wood and Rough Hill Wood SSSIs, also areas at Alvecote outside the SSSI. Smaller fragments of acid grassland / heathland on other sites, e.g. Priory Fields Nature Reserve, are also actively managed by WWT.
  - There are Environmental Stewardship Scheme agreements administered by Natural England for the management of acid grassland at Burton Dassett Country Park, near Avon Dassett.
  - Acid grassland at Whittleford Park, a 43ha site of an old brick works and good reptile habitat, is being managed by 'The Friends'; connectivity is provided by a railway.

- At Coombe Countryside Park the management of 3.5ha (the 'heathland') has been increased with the removal of rhododendron from 8ha (2012). Grazing by wild rabbits keeps the sward short restricting the ranker grasses.

- Restoration has occurred at the following sites:

  - In 2011 Friends of Baddesley Common set up work parties to remove invasive scrub from areas of acid grassland and heather. Pond restoration and creation is also planned at the site. A management plan for the acid grassland and heathland, written by group, has been agreed by Merevale Estate (the land owners). The pond projects have had input from WWT and Pond Conservation Trust (Million Ponds Project) who have helped with funding.

  - In 2011 part of the acid grassland at Abbey Fields, Kenilworth, was reseeded with a donation of £9k from the Friends of Abbey Fields with a mix of flowers suitable for the ground conditions; additional flower plugs have been added over the last 3 years and yellow rattle is added annually. It is cut and baled once a year in August and is a great success. The other area of acid grassland with an increasing population of harebells, is managed as a meadow, also cut and baled once a year.

  - At Coombe Countryside Park there are areas of good quality acid grassland/ heathland with some good indicator plant species; restoration of a further 12ha began in 2014.

  - At Kenilworth Common, WWT has coppiced glades, improving the connectivity with grassland on the railway cutting, and spread native acid seed mix and green hay to increase species diversity.

- Groups such as Butterfly Conservation, continue to increase our knowledge of the invertebrate assemblages of this habitat category.

## 6. PROPOSED LOCAL ACTIONS

| ACTION | Lead | Partners | By |
|---|---|---|---|
| PLEASE CONSULT THE ***'GENERIC HABITATS'*** ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL HABITAT PLANS | | | |
| **Policy, Legislation & Protection** | | | |
| **PL1.** Ensure that any site meeting the relevant criteria is considered for designation as an SSSI. | NE | LWSP WWT WCC SMBC CCC | ongoing |
| **PL2.** Continue to select all qualifying lowland acid grassland sites as LWSs and enter onto database. | LWSP | NE HBA LAs | ongoing |
| **PL3.** Ensure that the protection of all acid grassland is included in Local Development | WCC | NE WWT LAs | ongoing |

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| Frameworks, Neighbourhood Plans and any other relevant strategies, including targets for maintenance, achieving condition and expansion for each Local Authority. | | | |
| **PL4.** Ensure that new minor or major developments result in net biodiversity gain through adherence to the mitigation hierarchy. | WCC | NE WWT LPAs NWBC NBBC | ongoing |
| **Site / Species Safeguard & Management** | | | |
| **SM1.** Maintain favourable ecological condition of all 72.75ha (HBA, 2012) of existing acid grassland by ensuring the appropriate management of all sites. | CSG | NE WWT CFE WBRC LOs LAs CCP | ongoing |
| **SM2.** Continue to achieve favourable condition of **6ha** of existing acid grassland by 2015 and a further 14ha by 2026 by appropriate management. | CSG | NE WWT LOs CCP LAs | 2015-2026 |
| **SM3.** Continue restoration of degraded acid grassland at the three SSSIs and other sites. | NE | WWT LAs LOs | ongoing |
| **SM4.** Expand the area of acid grassland by 3ha by 2015 and a further 8ha by 2026, including one site of at least 3ha. | CSG | WWT WCC FoGs LAs LOs QOs CCP | 2015-2026 |
| **SM5.** Work at a landscape scale, focusing effort on identified important clusters of acid grassland to maximise benefit, 'rewilding' the wider countryside and restoring the range of the habitat to build resilience to climate change. Target area is:<br>• Hartshill Ridge (west end)<br>• Hartshill Ridge (east end) | NWBC NBBC | NE WCC WWT LOs QOs | 2026 |
| **Advisory** | | | |
| **A1.** Inform landowners of their acid grassland resource and provide management advice, sources of machinery, etc. | NE | WCC WWT | ongoing |
| **A2.** Signpost Best Practice Guidelines to appropriate landowners via agri-environment schemes. | NE | CFE | ongoing |

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| **Research & Monitoring** | | | |
| **RM1.** Survey and map digitally all areas of acid grassland and heathland to establish a true baseline of data for these often co-existing habitats. | LWSP | HBA WWT WCC LAs LOs | ongoing |
| **RM2.** Identify sites for potential expansion of acid grassland. | HBA | NE WCC WWT LAs NAM | ongoing |
| **RM3.** Identify plant indicator species to establish criteria for assessing the quality of acid grassland habitat. | HBA | NE WCC BC LWSP | Done |
| **RM4.** Use indicator species criteria for monitoring acid grassland condition and expansion every 5 years particularly on LWSs. | HBA | NE WWT BC LWSP | ongoing |

**Abbreviations**: **CCC** – Coventry City Council, **CCP** – Coombe Country Park, **CFE** – Campaign for the Farmed Environment, **CSG** – LBAP Core Steering Group, **FoGs** – 'Friends of' Groups, **HBA** – Habitat Biodiversity Audit partnership, **LAs** – Local Authorities, **LOs** – Landowners, **LPAs** – Local Planning Authorities, **LWSP** – Local Wildlife Sites Project, **NBBC** – Nuneaton & Bedworth Borough Council, **NE** – Natural England, **NWBC** – North Warwickshire Borough Council, **SMBC** – Solihull Metropolitan Borough Council, **WBRC** – Warwickshire Biological Record Centre, **WCC** – Warwickshire County Council, **WWT** – Warwickshire Wildlife Trust.

## 7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Results will be entered onto the national Biodiversity Action Reporting System BARS. Progress with this plan up to 2008 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

## 8. BIBLIOGRAPHY

Kirby, P. (1992). Habitat management for Invertebrates: a Practical Handbook. RSPB.

Falk, S.J. (2009) Warwickshire's Wildflowers - provides habitat-specific species lists, and explanations of habitats from a botanical viewpoint.

Treweek Environmental Consultants (2009) Regional Spatial Strategy (R.S.S.) Phase 3 Regional Habitats Targets Review, Technical Report pp.71-94, prepared for the W. Midlands Regional Assembly.

Lawton, J.H. (2010) Making Space for Nature: a review of England's wildlife sites and ecological network. Report to Defra, advocating a landscape-scale approach guided by four key principles, summarised as '*more, bigger, better and joined*'.

DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

Natural England (2010) Lowland Dry Acid Grassland BAP Priority Habitat Inventory for England – habitat surveillance pilots and inventory updates are part of the ongoing monitoring projects carried out by Natural England.

RSPB (2013) State of Nature – a stocktake of all our native wildlife by 25 wildlife organisations.

HBA (2013) The State of the Habitats of Warwickshire, Coventry and Solihull.

## 9. FURTHER INFORMATION

Habitat Biodiversity Audit (HBA) for Warwickshire, Coventry & Solihull – mapping data set and associated information. Phase 1 (JNCC ) 1996-2002 and Phase 2 (Local Wildlife Sites) ongoing.

Statutory conservation agencies, WWT, Royal Society for the Protection of Birds (RSPB) and Warwickshire Museum staff can provide advice on appropriate management, restoration and expansion of lowland acid grasslands.

Biodiversity Planning Toolkit - a new online resource to help incorporate biodiversity and geodiversity into the planning system and new development.

Buglife - the Invertebrate Conservation Trust (2004) – provides information on the habitat-management requirements of key invertebrates - CD-Rom available.

Natural England (2005). The Importance of Livestock Grazing for Wildlife Conservation Leaflet available from 01733 455100.

Grazing Animals Project - provides advice on managing wet grasslands for birds, and other information on grazing.

The Grasslands Trust was established in 2002 to address the crisis facing our wildflower-rich grasslands.

Plantlife - a charity which carries out plant species and habitat conservation, owns and manages nature reserves, campaigns, and raises awareness through education.

Flora Locale - promotes the restoration of wild plants and habitats for the benefit of biodiversity, landscapes and people in town and countryside.

Nature After Minerals provides advice on creating and managing different grassland habitats.

## 10. CONTACT

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